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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/632,082	07/30/2003	Hea-Chun Lee	21C-0056	2199
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55 GRIFFIN R	OAD SOUTH		HAN, JASON	
BLOOMFIELD	O, CT 06002		ART UNIT	PAPER NUMBER
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			11/14/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)	
	10/632,082	LEE ET AL.	
Office Action Summary	Examiner	Art Unit	
	Jason M. Han	2875	
The MAILING DATE of this communication a Period for Reply	ppears on the cover sheet wi	th the correspondence address	
A SHORTENED STATUTORY PERIOD FOR REF WHICHEVER IS LONGER, FROM THE MAILING - Extensions of time may be available under the provisions of 37 CFR after SIX (6) MONTHS from the mailing date of this communication. - If NO period for reply is specified above, the maximum statutory perions are provided by the office later than three months after the main earned patent term adjustment. See 37 CFR 1.704(b).	DATE OF THIS COMMUNIC 1.136(a). In no event, however, may a re- od will apply and will expire SIX (6) MON ute, cause the application to become AB	CATION. apply be timely filed THS from the mailing date of this communication. ANDONED (35 U.S.C. § 133).	
Status			
1) Responsive to communication(s) filed on 06	September 2007.	•	
2a) This action is FINAL . 2b) ⊠ Th	nis action is non-final.		
3) Since this application is in condition for allow	<u>'</u>	• •	
closed in accordance with the practice under	r <i>Ex parte Quayle</i> , 1935 C.D	. 11, 453 O.G. 213.	
Disposition of Claims			
4)⊠ Claim(s) <u>1-36</u> is/are pending in the application	on.		
4a) Of the above claim(s) 14-28 is/are withdr	awn from consideration.		
5) Claim(s) is/are allowed.			
6)⊠ Claim(s) <u>1-13 and 29-36</u> is/are rejected.			
7) Claim(s) is/are objected to.			
8) Claim(s) are subject to restriction and	/or election requirement.		
Application Papers			
9) The specification is objected to by the Exami	ner.		
10)⊠ The drawing(s) filed on 13 July 2003 is/are: a	a)⊠ accepted or b)⊡ objec	ted to by the Examiner.	
Applicant may not request that any objection to the	• • • • • • • • • • • • • • • • • • • •	• •	
Replacement drawing sheet(s) including the corre	· · · · · · · · · · · · · · · · · · ·		
11) The oath or declaration is objected to by the	Examiner. Note the attached	Office Action or form PTO-152.	
Priority under 35 U.S.C. § 119			
12)⊠ Acknowledgment is made of a claim for forei a)⊠ All b)□ Some * c)□ None of:	gn priority under 35 U.S.C. §	119(a)-(d) or (f).	
1. Certified copies of the priority docume	nts have been received.		
2. Certified copies of the priority docume	·		
3. Copies of the certified copies of the pr	•	received in this National Stage	
application from the International Bure	, .,		
* See the attached detailed Office action for a li	st of the certified copies not	received.	
Attachment(s)			
1) Notice of References Cited (PTO-892)		ummary (PTO-413)	
2) Notice of Draftsperson's Patent Drawing Review (PTO-948) 3) Information Disclosure Statement(s) (PTO/SB/08)	_)/Mail Date formal Patent Application	
Paper No(s)/Mail Date	6) Other:		

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on September 6, 2007 has been entered.

Response to Arguments

- 2. Applicant's arguments with respect to Claims 1-13 and 29-36 have been considered but are moot in view of the new ground(s) of rejection.
- 3. In response to Applicant's argument, "it is respectfully submitted that Ishida does not disclose a second board at the high-pressure-side end portions, and only discloses an inverter substrate 17 near the high high-pressure-side end portions in FIG. 4, wherein the inverter substrate is not coupled to the second electrode and does not provide the second electrode with a discharge voltage" [Page 11], the prior art to Ishida remains commensurate to the scope of the claim as stated by the Applicant within the context of the body of the claim language and as construed by the Examiner. Applicant is advised that the claim language makes no reference to the second board/second electrode being coupled to the inverter.

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- 4. In response to Applicant's argument, "it is respectfully submitted that the lamp system of Mazis teaches that the regions of the conductive strips 45 on the wiring plate 44 which contact the socket contacts 28 are shown as 46. (Col. 3, lines 55-57.) Thus, reference numeral "46" of Mazis discloses a conductive strip, not a through-hole as alleged by the Examiner" [Page 12], Mazi is still considered commensurate to the scope of the claim, as elucidated in the rejection below, whereby the through-holes have been redefined to be (37).
- 5. In response to Applicant's argument concerning "a second board, coupled to the second electrode, for providing the second electrode with the second discharge voltage", it remains obvious to one ordinarily skilled in the art at the time of invention to have incorporated a second board coupled to the second electrode in order to provide greater structural integrity for the lamps and facilitate manufacturing, assembly, and/or replacements of the lamps. Mere duplication of the board is considered obvious and commonly known in the art, as corroborated by Oyokota (JP 2002-132193 A). Applicant is again advised that the determination of the first and second electrodes is open to the Examiner's interpretation, whereby the claim language does not distinguish itself over the prior art. Regardless, the Examiner is primarily relying upon the teaching that a second board, as principally taught by Oyokota, may be incorporated to provide the second electrode with a second discharge voltage. In response to Applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See In re Keller, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); In re Merck &

Co., 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Further elucidation is provided in the obviousness rejection below.

The following claims have been rejected in light of the specification, but rendered the broadest interpretation as stated by the Applicant within the context of the body of the claim language and as construed by the Examiner [MPEP 2111].

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

- (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.
- 6. Claims 1, 7, and 35-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishida et al. (U.S. Patent 7,057,678 B2) in view of Oyokota et al. (JP 2002-132193 A).
- 7. With regard to Claims 1 and 7, Ishida discloses a lamp assembly including:
 - At least two lamps [Figure 1: (27)] inherently installed into sockets, whereby the lamps being of a fluorescent bulb type [Column 1, Line 43], which are commonly known in the art and inherently provide a fluorescent layer formed on an inner surface of the lamp body, a discharge gas disposed in the body, first [Figure 1: (29)] and second electrodes for providing the lamp body with discharge voltages;

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- A first lamp holder [Figure 1: (26)] having a pipe-shape, whereby a first end portion of the lamp is inserted into and fastened to the first lamp holder;
- A first board [Figure 1: (28)] that makes contact with the first lamp holder, whereby the first board has a flat plate shape, and is coupled to first electrodes of the lamps to provide the first electrodes with a first discharge voltage, and further whereby the first electrode extends through the first board to an opposite surface thereof; and
- A first connector [Column 2, Lines 15-19; e.g., Figure 4: (15)] installed on the first board to electrically connect the first electrodes that are coupled to the first board to an inverter that generates the first discharge voltage.

Ishida does not specifically teach a second board, coupled to the second electrode, for providing the second electrode with the second discharge voltage.

Oyokota teaches a lamp assembly having at least two fluorescent lamps
[Drawings 1, 4-5: (2)] with first and second electrodes that are coupled to first [Drawing 1: (9, 10, 11, 14)] and second [Drawing 1: (8, 10, 11, 14)] boards, respectively on either sides of the lamps, which provide first and second discharge voltages [Drawing 5] to the respective electrodes.

It would have been obvious to one ordinarily skilled in the art at the time of invention to modify the lamp assembly of Ishida to incorporate a second board, coupled to the second electrode, for providing the second electrode with the second discharge voltage, as principally taught by Oyokota, in order to provide a more simplified means for electrically controlling the lamp/illumination, as well as to provide greater structural

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integrity for the lamps and facilitate manufacturing, assembly, and/or replacements of the lamps.

In addition, regarding Claim 7, it would have been obvious to one ordinarily skilled in the art at the time of invention to modify Ishida to incorporate a second board coupled to the second electrode and a second lamp holder, whereby the second board and the second lamp holder would have identical shape with the first board and the first lamp holder, respectively. Such a configuration is commonly known within the art, as demonstrated in the prior art cited (i.e., Oyokota – JP2002132193A), whereby it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8.

- 8. With regards to Claim 35, Ishida in view of Oyokota discloses the claimed invention as cited above. In addition, Ishida teaches the first board [Figure 1: (28)] being disposed such that a major surface of the first board [Figure 1: (28a)] is substantially perpendicular to a longitudinal direction of each of the lamps [Figure 1: (27)].
- 9. With regards to Claim 36, Ishida in view of Oyokota discloses the claimed invention as cited above. In addition, Ishida teaches the first board [Figure 1: (28)] being intermediate the first lamp holder [Figure 1: (26)] and a terminal end of the first electrode [Figure 1: proximate (28b)].
- 10. Claims 2-5 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishida et al. (U.S. Patent 7,057,678 B2) in view of Oyokota et al. (JP 2002-132193 A) as applied to Claim 1 above, and further in view of Mazis (U.S. Patent 4,504,891 A).

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11. With regards to Claim 2, Ishida in view of Oyokota discloses the claimed invention as cited above. In addition, Ishida inherently teaches the first board including a first insulated body and at least one first conductive pattern electrically connected to the first electrode of each of the lamps [Column 2, Lines 6-14].

Ishida does not specifically teach the first board having at least two first throughholes formed on the first insulated body, whereby each of the first through-holes receives the first electrode of each of the lamps.

Mazis teaches a first board including:

- A first insulated body [Figure 3: (23, 44); inherent];
- At least one first conductive pattern [Figure 3: (45)] electrically connected to the first electrode of a plurality of lamps; and
- At least two first through-holes [Figure 3: (37, 46)] formed on the first insulated body, whereby each of the first through-holes receives the first electrode of each of the lamps.

It would have been obvious to one ordinarily skilled in the art at the time of invention to modify the lamp assembly of Ishida in view of Oyokota to incorporate the first board with integral lamp inputs/two through-holes of Mazis in order to simplify manufacturing, as well as facilitate simple and easy installment/replacement of the lamps. Such a bi-pin configuration/connector is commonly known within the art of fluorescent tubes, whereby it is further obvious that one would want to modify the lamp assembly of Ishida to facilitate the use of said bi-pin fluorescent lamps.

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12. With regards to Claim 3, Ishida in view of Oyokota and further in view of Mazis discloses the claimed invention as cited above. In addition, Ishida teaches a first terminal [Column 2, Lines 15], coupled to receive the first discharge voltage from the inverter and provide the first discharge voltage to the first connector [Column 2, Lines 15-19].

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- 13. With regards to Claim 4, Ishida in view of Oyokota and further in view of Mazis discloses the claimed invention as cited above. In addition, Ishida teaches the first connector [Figure 1: (28b)] being installed on the first conductive pattern of the first board [Column 2, Lines 6-14], and electrically connecting the first conductive pattern of the first board to the inverter through the first terminal [Column 2, Line 15].
- 14. With regards to Claim 5, Ishida in view of Oyokota and further in view of Mazis discloses the claimed invention as cited above. In addition, Ishida teaches teach the first electrode being received in each of the first through-holes and the first conductive pattern being soldered [Figure 1: (28b)] with each other and electrically connected to each other.
- 15. With regards to Claim 13, Ishida in view of Oyokota and further in view of Mazis discloses the claimed invention as cited above. In addition, Mazis teaches the number of lamps being four [Figure 2]. Said number of lamps not being the patentable feature of the device, whereby it would be obvious to one ordinarily skilled in the art to modify the number of lamps to a specific number to correspond with the size of the LCD.

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16. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ishida et al. (U.S. Patent 7,057,678 B2) in view of Oyokota et al. (JP 2002-132193 A) as applied to Claim 1 above, and further in view of Saito et al. (U.S. Patent 6,441,874 B1).

Ishida in view of Oyokota discloses the claimed invention as cited above, but does not specifically teach the first lamp holder comprising of rubber.

Saito teaches a lamp holder [Figures 1-7: (9)] having a pipe-shape and comprising of rubber [Column 5, Lines 12-16].

It would have been obvious to one ordinarily skilled in the art at the time of invention to modify the lamp assembly of Ishida in view of Oyokota to incorporate the rubber pipe-shaped lamp holder of Saito to provide greater security to the fluorescent lamps, as well as prevent luminance drop via suppressing heat radiation at the electrode portions of the fluorescent lamps so as to secure sufficient amount of mercuric vapor in the whole of said lamps [see Saito: Abstract].

- 17. Claims 8-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishida et al. (U.S. Patent 7,057,678 B2) in view of Oyokota et al. (JP 2002-132193 A) as applied to Claim 7 above, and further in view of Mazis (U.S. Patent 4,504,891 A).
- 18. With regards to Claim 8, Ishida in view of Oyokota discloses the claimed invention as cited above. In addition, Ishida inherently teaches the first board including a first insulated body and at least one first conductive pattern electrically connected to the first electrode of each of the lamps [Column 2, Lines 6-14].

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Ishida in view of Oyokota does not specifically teach the second board having at least two first through-holes formed on the second insulated body, whereby each of the second through-holes receives the second electrode of each of the lamps.

Mazis teaches first and second boards [Figure 2: (23, 24)] including:

- An insulated body [Figure 3: (23, 44); inherent];
- At least one conductive pattern [Figure 3: (45)] electrically connected to an electrode of each of a plurality of lamps; and
- At least two through-holes [Figure 3: (37, 46)] formed on the insulated body,
 whereby each of the through-holes receives the electrode of each of the
 lamps.

It would have been obvious to one ordinarily skilled in the art at the time of invention to modify the lamp assembly of Ishida in view of Oyokota to incorporate the second board with integral lamp inputs/two through-holes of Mazis in order to simplify manufacturing, as well as facilitate simple and easy installment/replacement of the lamps. Such a bi-pin configuration/connector is commonly known within the art of fluorescent tubes, whereby it is further obvious that one would want to modify the lamp assembly of Ishida to facilitate the use of said bi-pin fluorescent lamps.

19. With regards to Claim 9, Ishida in view of Oyokota and further in view of Mazis discloses the claimed invention as cited above. In addition, Ishida teaches a second connector [Figure 1: (28b)] installed on the second conductive pattern; and a second terminal [Column 2, Line 15], coupled to the second connector to receive the second

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discharge voltage from the inverter and provide the second discharge voltage to the second connector.

- 20. With regards to Claim 10, Ishida in view of Oyokota and further in view of Mazis discloses the claimed invention as cited above. In addition, Ishida teaches the second connector [Figure 1: (28b)] electrically connecting the second conductive pattern of the second board to the inverter through the second terminal [Column 2, Line 15].
- 21. With regards to Claim 11, Ishida in view of Oyokota and further in view of Mazis discloses the claimed invention as cited above. In addition, Ishida teaches teach the second electrode being received in each of the second through-holes and the second conductive pattern being soldered [Figure 1: (28b)] with each other and electrically connected to each other.
- 22. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ishida et al. (U.S. Patent 7,057,678 B2) in view of Oyokota et al. (JP 2002-132193 A) as applied to Claim 7 above, and further in view of Saito et al. (U.S. Patent 6,441,874 B1).

Ishida in view of Oyokota discloses the claimed invention as cited above. In addition, Ishida teaches a lamp holder [Figure 1: (26)] having a pipe-shape, whereby an end portion of the lamp is inserted into the pipe-shape to be fastened to the lamp holder.

Ishida in view of Oyokota does not specifically teach the second lamp holder comprising of rubber.

Saito teaches a lamp holder [Figures 1-7: (9)] having a pipe-shape and comprising of rubber [Column 5, Lines 12-16].

It would have been obvious to one ordinarily skilled in the art at the time of invention to modify the lamp assembly of Ishida in view of Oyokota, specifically the second lamp holder, to incorporate the rubber pipe-shaped lamp holder of Saito to provide greater security to the fluorescent lamps, as well as prevent luminance drop via suppressing heat radiation at the electrode portions of the fluorescent lamps so as to secure sufficient amount of mercuric vapor in the whole of said lamps [see Saito: Abstract].

- 23. Lastly, it should further be mentioned that Claims 7-12 are a mere duplication of the opposite side of the lamp assembly, whereby it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8.
- 24. Claims 29-32 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishida et al. (U.S. Patent 7,057,678 B2) in view of Oyokota et al. (JP 2002-132193 A).
- 25. With regard to Claims 29 and 34, Ishida discloses a lamp assembly including:
 - At least two lamps [Figure 1: (27); Column 1, Lines 64-65] inherently installed into sockets, whereby the lamps being of a fluorescent bulb type [Column 1, Line 43], which are commonly known in the art and inherently provide a fluorescent layer formed on an inner surface of the lamp body, a discharge gas disposed in the body, and first [Figure 1: (29)] and second electrodes for providing the lamp body with discharge voltages;

- A first lamp holder [Figure 1: (26)] having a pipe-shape, whereby a first end portion of the lamp is inserted into and fastened to the first lamp holder; and
- A first board [Figure 1: (28)] that makes contact with the first lamp holder and is electrically coupled to first electrodes of the lamps such that the first end portion of the lamp body is spaced apart from the first board, whereby the first board further includes:
 - = An insulated body [Figure 1: (28) inherent]; and
 - At least one conductive pattern inherently formed on the insulated body and electrically connected to the first electrode of each of the lamps [Column 2, Lines 6-14]; and
 - At least two through-holes formed on the insulated body and electrically connected to the first electrode of each of the lamps
 [Column 2, Lines 1-11 plurality of lamps each having at least one through-hole for the lead wire (29) to go through]; and
- A connector [Column 2, Lines 15-19; e.g., Figure 4: (15)] installed on the conductive pattern to electrically connect the first electrodes that are coupled to the first board to an inverter that generates the first discharge voltage.

Ishida does not specifically teach a second board, coupled to the second electrode and a second lamp holder, for providing the second electrode with the second discharge voltage.

Oyokota teaches a lamp assembly having at least two fluorescent lamps

[Drawings 1, 4-5: (2)] with first and second electrodes that are coupled to first [Drawing

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1: (9, 10, 11, 14)] and second [Drawing 1: (8, 10, 11, 14)] boards, respectively on either sides of the lamps, which provide first and second discharge voltages [Drawing 5] to the respective electrodes.

It would have been obvious to one ordinarily skilled in the art at the time of invention to modify the lamp assembly of Ishida to incorporate a second board, coupled to the second electrode, for providing the second electrode with the second discharge voltage, as principally taught by Oyokota, in order to provide a more simplified means for electrically controlling the lamp/illumination, as well as to provide greater structural integrity for the lamps and facilitate manufacturing, assembly, and/or replacements of the lamps.

In addition, regarding Claim 34, it would have been obvious to one ordinarily skilled in the art at the time of invention to modify Ishida to incorporate a second board coupled to the second electrode and a second lamp holder, whereby the second board and the second lamp holder would have identical shape with the first board and the first lamp holder, respectively. Such a configuration is commonly known within the art, as demonstrated in the prior art cited (i.e., Oyokota – JP2002132193A), whereby it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8.

26. With regards to Claim 30, Ishida in view of Oyokota discloses the claimed invention as cited above. In addition, Ishida teaches a terminal coupled to the connector to receive the first discharge voltage from the inverter and provide the first discharge voltage to the connector [Column 2, Line 15].

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- 27. With regards to Claim 31, Ishida in view of Oyokota discloses the claimed invention as cited above. In addition, Ishida teaches the connector [Figure 1: (28b)] electrically connects the conductive pattern of the first board to the inverter through the terminal [Column 2, Lines 15-19].
- 28. With regards to Claim 32, Ishida in view of Oyokota discloses the claimed invention as cited above. In addition, Ishida teaches the first electrode [Figure 1: (29)] being received in each of the through-holes and the conductive pattern are soldered with each other and electrically connected to each other [Column 2, Line 10].
- 29. Claim 33 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ishida et al. (U.S. Patent 7,057,678 B2) in view of Oyokota et al. (JP 2002-132193 A) as applied to Claim 29 above, and further in view of Saito et al. (U.S. Patent 6,441,874 B1).

Ishida in view of Oyokota discloses the claimed invention as cited above, but does not specifically teach the first lamp holder comprising of rubber.

Saito teaches a lamp holder [Figures 1-7: (9)] having a pipe-shape and comprising of rubber [Column 5, Lines 12-16].

It would have been obvious to one ordinarily skilled in the art at the time of invention to modify the lamp assembly of Ishida in view of Oyokota to incorporate the rubber pipe-shaped lamp holder of Saito to provide greater security to the fluorescent lamps, as well as prevent luminance drop via suppressing heat radiation at the electrode portions of the fluorescent lamps so as to secure sufficient amount of mercuric vapor in the whole of said lamps [see Saito: Abstract].

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason M. Han whose telephone number is (571) 272-2207. The examiner can normally be reached on 8:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sandra O'Shea can be reached on (571) 272-2378. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

> Jason M Han Examiner Art Unit 2875

JMH (11/8/2007)

Technology Center 2800